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Towards an Ecological Model for Supporting Teachers: A Proposal for a Study Estimating the Effect of a Trauma-Informed Psychoeducational Group Intervention on Reducing Teacher Stress

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Towards an Ecological Model for Supporting Teachers: A Proposal for a Study Estimating the Effect of a Trauma-Informed Psychoeducational Group Intervention on Reducing Teacher Stress

by

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Dedication

This report is dedicated to the memory of my grandfather, Michael Malloy, whose support, love, and curiosity throughout my life helped me believe in myself. This report is also dedicated to my grandmother, Leah Malloy, and my mother, Nancy LaFleur, who continue to support me in so many ways as I continue this academic venture. Finally, I dedicate this report to my chosen family, who I have the privilege to say are far too many in number for me to name in this document: thank y'all for seeing me.

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Abstract

Towards an Ecological Model for Supporting Teachers: A Proposal for a Study Estimating the Effect of a Trauma-Informed Psychoeducational Group Intervention on Reducing Teacher Stress

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Continued documentation of teacher stress among U.S. educators necessitates further research to meet their needs. Toxic stress—a debilitating stress response often triggered when exposed to effects of another's trauma—has been identified as a driver for teacher stress, yet few researchers have conceptualized adequate interventions for them. The following proposal presents a trauma-informed psychoeducational group for secondary school teachers in Central Texas. Its purpose will be to examine the effect of trauma education on levels of stress, trauma awareness, and help-seeking among educators when compared to a control group. Paired t-tests will be used to determine any statistically significant differences between group means on outcome variables. Qualitative and quantitative analyses were used to examine results from a pilot version of the proposed study, the results of which are discussed in terms of future directions for trauma-informed group work with teachers.

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"Thank you for validating how I have been feeling. Just went to the doctor yesterday for anti-depressants and was recently wondering with my teammates if we got back together 20 yrs. from now would it be like war vets, all with PTSD. SO overwhelmed!"

-Educator following a pilot trauma-informed psychoeducational group

Chapter 1: Introduction

The above quote characterizes the subjective experience of many educators working in U.S. schools today, in their own words something akin to a combat zone. Such a startling comparison highlights the stressful environment in which they operate, mirroring the experiences of war veterans with their own experiences with trauma in the classroom. Unfortunately the quoted educator's recognition of trauma and its effects comes as no surprise. Indeed, the complex causes and effects of trauma are ascendant in the national discourse and cut across disciplines. Trauma's impact on human development and long-term health outcomes guides contemporary best practices in medicine (Harris, Marques, Oh, Bucci, & Cloutier, 2017); informs new social policy initiatives (Leitch, 2017); and now helps shape contemporary education policy (Carello & Butler, 2015). Education researchers are paying attention more so than ever to how difficult experiences influence how students think, act, feel, and connect with others (Crosby, 2015). Such initiatives make sense in the face of stark statistics that reflect the ubiquity of traumatic experiences among children, with some studies reporting over 50% of sampled youth in the U.S. having experienced a potentially traumatizing event ("Adverse Childhood Experiences (ACEs)," 2017). These events can range from parental neglect to experiences of violence and still result in maladaptive and painful emotional,

behavioral, and physical symptoms (Koita et al., 2018). As a construct, the manifestations of these distressing symptoms as a result of trauma exposure among youths is often referred to as toxic stress (Walkley & Cox, 2013). Education stakeholders have begun to push for trauma-informed practices across U.S. schools to address toxic stress among students.

Curiously missing from much of the conversation on trauma-informed practices in education is the effect that student experiences have on their teachers. U.S. teachers spend thousands of hours a year on average with students (OECD, 2017), and these interactions could very well be affected by student experiences of trauma. Some researchers have begun to explore how exposure to student trauma can adversely impact their well being over time (Wolpow, 2009). It is critical to consider how teachers might be at risk for vicarious trauma, a particular form of traumatic exposure. Vicarious trauma occurs when someone is exposed to another person's traumatic or toxic stress and begins to experience distress and symptoms as if it were their own traumatic experience (Craig & Sprang, 2010). The construct has typically been explored among clinicians and medical paraprofessionals working with trauma survivors, with research linking vicarious trauma to emotional distress, burnout, and compassion fatigue among other issues (Al-Mateen et al., 2015). It is interesting that teachers have only recently been examined as potential victims of vicarious trauma, given that they spend so much time with their students and the incidence of adverse experiences among U.S. children is so high.

Trauma seems an especially useful construct to explore among teachers considering the continued efforts to better understand and relieve the stressors of U.S. educators.

Lazarus and Folkman's transactional theory of stress and coping proves an apt framework with which to consider the potential effects of vicarious trauma to cause teacher stress. Lazarus and Folkman conceptualize stress and coping in terms of perceived demands and resources, with stress occurring when one's demands outweigh their resources (Lazarus & Folkman, 1984). This theoretical model emphasizes the importance of an individual's ability to balance perceived demands, such as everyday stressors, with a cache of coping resources to help them confront those demands. This model has been used to explicate the manifold demands placed upon teachers that result in negative outcomes like burnout, compassion fatigue, and teacher turnover (McCarthy, Lambert, & Reiser, 2014; Fisher, 2011; Klassen & Chiu, 2010). Vicarious trauma can be conceptualized as an understudied and intense demand placed upon teachers who operate in an already stressful environment. Some have begun to examine vicarious trauma and the risks that it poses to teachers, but there is a need to explore more interventions to explicate this demand more clearly (Wolpow, 2009).

Groups have been proven to be an effective intervention method for alleviating teacher stress (Hwang, Bartlett, Greben, & Hand, 2017; Reiser, Murphy, & McCarthy, 2016). Given the limited time and resources of teachers, it would be instructive to see the effect of a psychoeducational group that focuses on trauma education. When it comes to psychoeducational groups for teachers, the vast majority focus on providing educators

with information regarding student learning disorders (Montoya, Colom, & Ferrin, 2011). There are some psychoeducational groups for toxic stress and trauma, but they usually target patients or parents and have found to be effective in informing participants about the etiology of trauma (Woods-Jaeger et al., 2018; Pratt et al., 2005). As of the writing of this document, a literature search yielded no results for a psychoeducational group for teachers about trauma and how it can affect them in the classroom. Given this gap in the literature, it would be import to view the efficacy of single session group intervention that focuses on delivering information regarding trauma and teacher stress. Ideally such an intervention could lay the foundation for addressing the issue more broadly in subsequent, iterative interventions in keeping with already established trauma-informed models of care in schools (Martin Sandra L. et al., 2017). Once given the background on the etiology of trauma, teachers can access further resources within their school--such as trauma-informed mindfulness groups or consultations with clinicians--with a better understanding of how they can support students and themselves.

There is a strong argument to be made for teachers bearing the brunt of student trauma, given the prevalence of adverse experiences among youth and the breadth and duration of a teacher's interaction with their students. In fact, teachers present as an ideal population study vicarious trauma, the impact of which cannot be overstated. Vicarious trauma is troubling phenomenon with adverse effects documented among clinical professionals, and these are vocations that are not even considered to be as stressful as teaching. It is incumbent upon administrators and school-based clinicians to help alleviate

some of teacher demands brought on by student trauma. Providing a robust educational foundation for those most likely affected by student trauma can be a critical first step towards addressing the ails brought about by trauma in schools.

The proposed study seeks to examine the effects of a trauma-informed psychoeducational group on teacher stress, trauma awareness, and help-seeking attitudes. The group utilizes the transactional theory of coping and stress to frame how psychoeducation about trauma may mitigate demands placed on teachers. The format and length of the group was determined by consultation with researchers who previously conducted stress reduction groups for teachers, as well as with school counselors and school psychologists. These researchers found it too cumbersome to include a psychoeducation component about trauma alongside the teaching of stress reducing mindfulness skills in their groups, and discussed the viability of separating them. Their collective feedback indicated that the best option might be a one-time, data-driven and trauma-informed group intervention for educators.

This document will focus on the literature review and methodology underpinning the proposed intervention, as well as analyses and expected findings upon its completion. The proposal also contains preliminary data from a pilot version of the intervention administered to teachers in at two public high schools in central Texas. Findings from the pilot will be used to tailor psychoeducational material for the proposed intervention and is discussed at length. Finally, the document will close with a broader discussion about the placement of such an intervention within a broader ecological model of support.

Chapter 2: Literature Review

Linking Teacher Stress, Student Experiences, and Vicarious Trauma

Teacher Stress: An Ongoing Crisis in U.S. Education

Teachers in the contemporary U.S. education system face numerous challenges that distinguish them as particularly vulnerable to stress. In fact, Dick et al. (2014) cited research indicating that of any profession, teachers report the highest degree of self-perceived stress in the workplace. As a construct, teacher-stress refers to "the experience by a teacher of unpleasant, negative emotions…[that] results from some aspect of their work as a teacher," and has been acknowledged to play a critical role in teacher performance and job satisfaction (Klassen & Chiu, 2010). Research documenting the adverse outcomes related to teacher-stress came about in the 1980's (Finlay-Jones, 1986), and have since clearly shown linkages between teacher-stress and psychological distress (Montgomery & Rupp, 2005; Hakanen, Bakker, & Schaufeli, 2006).

One prominent framework for teacher stress comes from Lazarus and Folkman's Transactional Theory (1984), which conceptualizes stress and coping as arising from an imbalance of perceived demands and resources. Resources are conceptualized as anything perceived to promote growth, independence, and healthy coping (Herman,

Hickmon-Rosa, & Reinke, 2018) which for teachers might include support from staff, free time, and access to tangible resources for their profession. Perceived demands on teachers come from many sources: on the macro-level, teachers work in an underfunded education system and receive some of the lowest pay relative to incomes of similarly educated workers anywhere in the world (OECD, 2017). In the classroom, teachers report significant demands including student misbehavior among and classroom management issues among others (Tsouloupas, Carson, Matthews, Grawitch, & Barber, 2010).

Lazarus and Folkman's theory declares that individuals are at risk for stress when their demands outweigh their resources to cope with a given situation (1984). The overloading of demands such as these at the expense of resources is thought to predispose one to stress (Schaufeli & Bakker, 2004). Their transactional theory has formed the bedrock for much of the academic stress and coping literature, including teacher stress (Spilt, Koomen, & Thijs, 2011). Key to understanding this theory is the role of perception: demands for one person may differ than those for another, based on their individual appraisals. When a teacher's perceived demands far exceed their resources, they are at risk for stress, which can result in job burnout, teacher turnover, or compromised quality of life (Kyriacou, 2001). High teacher stress has been found to negatively impact student and teacher well-being (Geving, 2007), as well as elicit negative student behaviors, which only further elevates stress in the classroom (Kokkinos, 2007; Friedman, 1995). Given the documented importance of the student-

teacher relationship on both student success and teacher stress (Spilt, Koomen, & Thijs, 2011), it is important to understand specific demands that may strain this dynamic.

Trauma and Its Effects on Children and Teachers

Experiences of trauma constitute a potential strain on the student-teacher dynamic. Trauma research, specifically as it pertains to children and young adults, has been prominent since the landmark findings of adverse childhood experiences (ACEs) in the mid-90's (Felitti et al., 1998). At that time, Felitti and colleagues inadvertently discovered the high incidence rate of ACEs such as parental neglect, abuse, divorce, and substance use among other events. Researchers discovered not only that far more children had experiences of ACEs as previously thought, but that incidence of ACEs among children were linked with adverse health outcomes, including smoking, substance use, and deleterious mental health conditions (Anda et al., 2006). Study into the long-enduring effects of ACEs on outcomes healthcare, mental health, and education-related outcomes continue into present day (Harris, Marques, Oh, Bucci, & Cloutier, 2017). Critical for expanding the understanding of trauma as a construct, ACEs often serve as heuristics for explaining the etiology of child and adolescent trauma (van Der Kolk, 2012; Koita et al., 2018). Student experiences of trauma can result in distressing symptoms, and can be linked to disruptive behaviors in the classroom (Spinazzola, Kolk, & Ford, 2018; West, Day, Somers, & Baroni, 2014). These debilitating stress responses, often triggered when exposed to trauma, hereafter will be referred to as toxic stress.

Student experiences of trauma seem to be linked to teacher stress (Ball & Anderson-Butcher, 2011). Students with histories of adverse childhood experiences and/or developmental trauma can be at risk of exhibiting symptoms related to toxic stress, an under-researched demand for teachers. Toxic stress is a powerful and chronic form of stress involving frequent activation of the body's autonomic nervous system due to continued exposure to stressful events (Walkley & Cox, 2013). There is ample evidence documenting the precedence and etiology of toxic stress in children from researchers who examine and develop interventions for developmental trauma (Perry, 2009; van Der Kolk, 2012). Students with trauma histories often do not either have the means, knowledge, or motivation to seek treatment, leaving teachers to bear the responsibility of ad hoc mental health professional (Brunzell et al., 2015). Such constant exposure to distressing symptoms from students can pose a heavy burden on teachers. Researchers have found that by regularly interacting with others experiencing toxic stress, teachers can themselves experience symptoms of toxic stress (Woods-Jaeger et al., 2018). In terms of the transactional theory, taking on a student's toxic stress could constitute a costly demand on teachers, exacerbating an already stressful work environment.

Vicarious Trauma and Teachers

Some education researchers have sought to align the transfer of toxic stress with vicarious trauma. Vicarious trauma is defined as when an individual takes on another person's traumatic exposure and exhibits behavioral and emotional symptoms as if it were their own experience (Carello & Butler, 2015). Like toxic stress, vicarious trauma

can cause serious psychological distress and emotional turmoil, and as a construct has mostly been the domain of researchers examining first responders and clinicians working with survivors of trauma (Al-Mateen et al., 2015). Most studies have looked at the linkages between vicarious trauma and compassion fatigue and burnout among clinicians, with initial findings suggesting that increased burnout begets higher likelihood of vicarious trauma (Isobel & Angus-Leppan, 2018; Craig & Sprang, 2010). Such work echoes previous research on teacher stress, with a recent study finding that burnout may even increase a person's predisposition to vicarious trauma (Shoji et al., 2015).

Only recently have teachers as a population been considered for occurence of vicarious trauma and toxic stress (Wolpow et al., 2009). The operationalizing of toxic stress in educators resembles the study of vicarious trauma in clinicians and first responders. Both constructs emphasize the detrimental effects of professionals in helping fields when they internalize another person's traumatic experiences. Teachers may unknowingly work with many students with traumatic experiences, and continued exposure to them without proper support may endanger teachers to experiencing vicarious trauma (Woods-Jaeger et al., 2018). The potential risks associated with vicarious trauma are quite serious, from emotional issues such as anxiety to cognition problems including lack of focus and hypervigilance (Wolpow et al., 2009). Vicarious trauma is also associated with compassion fatigue and burnout, two adverse outcomes often associated with excess teacher stress (Burke & Greenglass, 1995; Hatcher, Bride, Oh, King, & Catrett, 2011). Though not all teachers will develop vicarious trauma,

exposure to student trauma without the necessary resources for support can increase their chances of experiencing it (Hydon et al., 2015).

To be clear, the chances of teachers working with students' traumas is quite high: a recent assessment from the Centers for Disease Control (2015) indicates at least 1 in 7 children in the U.S. have experienced child abuse and/or neglect. Another study of data from The National Survey of Children's Exposure to Violence found that 41.2% of a nationally representative sample of U.S. children experienced an assault-related injury in the past year (Finkelhor, Turner, Shattuck, & Hamby, 2013). On average, secondary school teachers spend nearly 1000 hours per year teaching a classroom of almost 24 students (OECD, 2014). Such figures suggest that a plurality of teachers would experience students in the classroom with trauma histories, putting intense demands on top of an already well-document long list. The risks for teachers point to a need to explore vicarious trauma further.

Public health and education researchers in particular have begun to develop methods for managing the risks that arise when addressing trauma in schools. The following section of the review will examine some of those attempts at school-based trauma interventions, with an emphasis on those that include teachers.

Trauma-Informed Care in Schools

Education researchers have recently sought to articulate the vastness and complexity of experiences of trauma among students and its broad consequences for teachers, school administrators, and parents. Indeed, the term "Trauma-Informed Care"

(TIC) has been ascendant in education literature when discussing trauma in schools. TIC is organized "to understand the ways in which violence, victimization, and other traumatic experiences may have impacted [others]...and to apply that understanding to the design of systems and provision of services" (Carello & Butler, 2015). TIC ideally works at every level of an organizational system so as to create a new ecology informed by our understanding of the ubiquity of trauma. With TIC, the architects of any intervention encourage collaboration, safety, empowerment, choice and trustworthiness among stakeholders in venues ranging from schools to clinics to office spaces (Overstreet & Chafouleas, 2016; Fallot & Harris, 2009). These principles are meant to emphasize to students that they can trust educators and work towards a collaborative, caring learning environment. In schools, TIC has generated much interest and enthusiasm from both educators and administrators, but successful attempts at implementing such principles have varied (Yatchmenoff, Sundborg, & Davis, 2017). TIC interventions in schools have thus far ranged from broad-based ecological interventions for entire schools (Crosby, 2015) to more targeted, group and individual approaches for at-risk students (Chemtob, Nakashima, & Hamada, 2002).

However, few if any interventions are designed to support teachers through the lens of TIC. This is curious given the well documented reality of teacher stress and literature suggesting teachers' openness to receiving mental health care (Camacho, Vera, Scardamalia, & Phalen, 2018). Indeed, most TIC models in schools include teachers as supports for students, but rarely is there mention of help built into TIC models for them

(Hydon, Wong, Langley, Stein, & Kataoka, 2015). Despite the support role teachers play in many TIC practices to date, many note the importance of supporting teachers for their own sake. For example, Martin et al. discuss the utilization of trauma-informed care as an approach for implementing sensitive pregnancy prevention programs in schools (2017). In addition to outlining the various practices needed to ensure that program development for students was sensitive, safe, and trauma-informed, the authors also mention the importance of adding in support or educational groups for the teachers and administrative staff. Such groups can be particularly helpful for teachers and staff to process their experiences and receive critical information about working with students experiencing trauma. To better understand groups as a potential intervention for teachers, the next section will focus on literature supporting the efficacy of group work, first as a viable modality for teachers, and then addressing psychoeducational group work specifically.

Reviewing the Group Work Literature

Group Work and Teachers

Group work has proven to be a fitting venue for addressing components of teacher stress. For example, a recent study by Reiser et al. (2016) examined the effects of a Mindfulness-Based Stress Reduction (MBSR) group for charter school teachers on their levels of stress in a condensed format (Reiser et al., 2016). Authors proposed a shorter group format (six hour-long sessions) that prioritizes psychoeducational components of MBSR, giving teachers concrete mindfulness tools to implement in the course of their work. The group also contained an explicit support component so that teachers would be

able to share their struggles and develop deeper connections among each other. Results from two randomized, waitlist-control trials suggest that teachers in the condensed MBSR group showed statistically significant reductions on a measure of teacher stress when compared to teachers who did not participate or dropped out of the group early (Reiser et al., 2016). Other documented approaches with promising outcomes include stress management groups with teachers (Ugwoke et al., 2018) and extended mindfulness groups (Gold et al., 2010).

The above mentioned groups focus on group process and cohesion among members to achieve therapeutic goals. One shortcoming of this format is that it diverts time away from communicating information pertinent to the group's purpose and goals. Given the aims of this study and the complexity of the subject matter, a psychoeducational group would prove to be an efficient modality for educating teachers on student behavior, especially pertaining to their mental health in a group format. There has been increasing demand for improved mental health literacy among teachers so that they may better work with affected students (Carr, Wei, Kutcher, & Heffernan, 2018).

There are examples of psychoeducational groups for teachers about students with Tourette's syndrome, which have proven to most effective when combining diagnostic information with best practices for working with affected students (Nussey, Pistrang, & Murphy, 2013). Other groups have been designed to educate both teachers and parents about the causes and behavioral symptoms of mental health conditions such as Attention Deficit Hyperactivity Disorder (ADHD) on students. A recent meta analysis found that

such groups helped teachers and parents better understand interactions with children, and facilitated subsequent changes that improved student behavior (Montoya, Colom, & Ferrin, 2011). Psychoeducational groups have been shown to also reduce negative symptoms when targeted at the actual population suffering from them. For example, a recent meta analysis of the results of psychoeducational groups for anxiety and depression found that they can produce reduction in symptoms, even when the design involves a single-session group (Donker, Griffiths, Cuijpers, & Christensen, 2009).

Group Work and Trauma

There are few documented instances of psychoeducational groups for professionals that might interact with survivors of trauma (Martin Sandra L. et al., 2017; Gould, Greenberg, & Hetherton, 2007) and even fewer still for survivors of trauma themselves (Jaycox Lisa H. et al., 2010; Phoenix, 2007). At this moment, no evidence of trauma-informed psychoeducational groups for teachers was found.

Again, there have been calls to provide such psychoeducation to teachers. Alisic et al. discuss the results of a measure of teacher comfort working with children with a history of trauma, distributed to 765 elementary school teachers in the Netherlands (2012). They state that many teachers expressed discomfort over scenarios where they envision working with children affected by trauma. Teachers with experience working with trauma or with specific trauma-informed trainings were less likely to have higher scores of confidence in their ability on the measure. The authors end with a call for more trauma-informed training be made available to teachers (Alisic et al., 2012).

There are other notable group-based approaches using principles of TIC to educate teachers about trauma in schools. Head Start Trauma Smart (HSTS) is an early education/mental health cross-systems partnership designed to work within the child's natural setting. Started in Kansas City, MO schools, their goal is to decrease the stress of chronic trauma, foster age appropriate social and cognitive development, and create an integrated, trauma-informed culture for young children, parents, and staff (Holmes et al., 2015). A large component of HSTS was training all staff in schools (from teachers to administrators to bus drivers) about the basics of trauma symptomatology so they can recognize it in others. Missing from their model, however, is training to support the teachers in their own experiences of toxic stress and trauma.

It is clear from the extant literature that groups specifically designed for teachers would fit well into the TIC model and may be viable for reducing teacher stress. Though teachers are included in many documented TIC models of care in schools, they are often trained to support students in crisis; their own potential stressors are given less attention. Too often teachers take on the role of mental health professional out of necessity, triaging students who experience trauma and other distressing experiences with little support themselves (Hydon, Wong, Langley, Stein, & Kataoka, 2015). Indeed, the exhaustive adverse outcomes related to teacher stress may in large part stem from teachers serving as the first line of defense to the consequences of trauma on a massive scale.

Research Questions

In order to address a gap in the group practice literature, and to build upon the nascent literature documenting vicarious trauma among teachers, the proposal below details a study examining the efficacy of a single session psychoeducational group for teachers. The group will explain how trauma manifests in students and offer resources and strategies to help teachers address trauma's impact on their own well being. Though a single-session psychoeducational group on trauma cannot fully "fix" the causes and effects of vicarious trauma among teachers, the group could provide a critical foundation for members in trauma education. The proposed intervention is intended to be a supplementary initiative to the trauma-informed care services already being integrated within participating schools, with a focus on providing support to teachers. The reasoning for this is to provide a foundation of psychoeducation, resources, and general support for teachers involved in this study. By working in such a way with an already nascent trauma-informed model, this proposal hopes to further move participating schools towards an ecological approach to supporting teachers in consideration of the following research questions:

Research Question 1: Are there meaningful differences between intervention group and no intervention on perceived levels of classroom stress when looking at pre and post test outcomes measuring this construct?

Research Question 2: To what extent can the proposed psychoeducational group, compared to no intervention, effect teachers' attitudes related to trauma-informed care?

Research Question 3: How does the proposed psychoeducational seminar effect teachers' likelihood of accessing supportive services (teacher groups, individual counseling, or other modality) for themselves?

Research Question 4: What comments do teachers have about the seminar, what common themes arise when examining their thoughts about it, and how might this better inform future trauma-informed interventions?

Chapter 3: Methods

This study will employ a mixed methods design, utilizing both quasi-experimental design and qualitative data analysis to determine the efficacy of the proposed pilot intervention: a trauma-informed psychoeducational group on vicarious trauma and its linkages to teacher stress. Efficacy of the intervention will be determined by measuring the following outcomes stated in the above research questions: 1.) teachers' perceived

demands and levels of perceived stress, 2.) teachers' attitudes and understanding of trauma-informed care, 3.) teachers' likelihood to access school support resources and use concepts from the intervention, and 4.) their comments about the intervention and how it can be improved.

Teachers considered part of the treatment group will be those randomized to attend the intervention group through a random number generator. Those in the treatment group will attend the proposed intervention group, while those randomized to the control group will be assigned to a "waitlist" given the option to attend another group later on. An analysis of pre- and post-test outcomes will evaluate teachers who participate in the intervention and those who didn't. Qualitative analyses will be conducted on written feedback from teachers in the treatment group. Details related to participation, facilitation, data collection, and intervention structure are described below.

Participants

The study population will be made up of high school teachers in a large urban school district in Central Texas. The proposed intervention program is anticipated to be implemented in five high schools. Recruitment for the study will be facilitated in coordination with a school psychologist and school counselors working within each school and in coordination with the principle investigator. Through their support in recruitment within each school, approximately fifteen individuals will be recruited for each intervention group, and a minimum of fifteen individuals will be recruited for each treatment group (treatment group $n = 15$) and another fifteen teachers (control group

n=15) who chose not to attend will be used as the control group in this quasi-experimental design. Maximum total sample size is anticipated to amount to N = 150, or an estimated 30 participants per school, with five schools projected to be in the study. These projected figures for this overall N were arrived at through a preliminary power analysis to determine the sample size for detecting an effect at 80% power.

Setting

The proposed intervention program will be implemented within schools that are currently utilizing trauma-informed approaches as outlined in the above literature review, providing mental health care and support for students, parents, and teachers. The intervention will specifically be delivered in confidential spaces secured by the school psychologist and counselors already working in the onsite clinic. The clinic provides a wide range of trauma-informed services including individual, family, and group counseling, teacher groups, and school-wide workshops in spaces throughout the schools. Though the school clinics have their own spaces for conducting services, the setting for the intervention spaces may differ depending on the schools' respective resources. For example, during the pilot intervention, groups took place at one school in a large classroom space; in the other school the group was conducted in an enclosed study hall within the school library. Any space used will be vetted by the school psychologist in coordination with administrators to ensure an adequately confidential location.

Facilitation

Staff from the clinic at each school will partner with the facilitator of the group, and may assist in minor administrative tasks when conducting the intervention if necessary. The main facilitator of the intervention is a doctoral student in the Educational Psychology department at University of Texas at Austin with previous clinical and research experience working with trauma, teacher stress, and group work. In the event that the main facilitator cannot conduct the intervention for any reason, there are two licensed psychologists that can act as potential co-facilitators. One is a counseling psychologist who specializes in research about teacher stress and group work, and the other is a school psychologist who oversees the operations of the clinic for the participating high schools. Other potential co-facilitators include doctoral and masters students in Counseling Psychology with an interest in teacher stress research.

Ideally, one facilitator will lead each group per school, with at least one other qualified assistant on hand. The assistant will likely be one of the doctoral or masters students with interest in studying teacher stress and trauma. The two licensed psychologists mentioned above will supervise the facilitators of the group during regularly scheduled meetings to monitor for any potential issues that might arise during the intervention. For ease of access and to ward against attrition, facilitation of the seminar will take place either after school, or during the teachers' lunch hour. Timing will be based on feasibility among teachers' schedules. Teachers at some schools will receive professional development (PD) credits for participating in the intervention.

Intervention

The intervention is designed to achieve three interconnected goals, to wit: (1) educate teachers and other staff about biological and behavioral symptoms of trauma exposure, (2) provide them with a lingua franca to address traumatic exposure/toxic stress in their students and themselves, and (3) offer resources and tools to work with each other and their students as they navigate the difficulties associated with toxic stress and vicarious trauma. By providing teachers with psychoeducation around toxic stress and vicarious trauma, they will learn to how to identify its manifestations within some of their students, and also within themselves. By couching that education within the context of support services already offered at their schools, they will likely be able to more readily reach out for those services to help cope with toxic and traumatic stress and teacher stress overall. Further, by providing teachers a space for support, they have an opportunity to process their experiences with the assistance of a facilitator, and connect with one another over the shared stressful experiences.

This intervention will take place in conjunction with trauma-informed mental health care efforts provided by the clinic collaborating on the study. The bulk of mental health work at these clinics focuses on supporting students, though they offer some support and mindfulness groups for teachers. The proposed intervention is designed to build upon the existing clinical infrastructure established by the participating clinic so as to further include teachers as recipients of services. The proposed intervention was developed with the support of the participating clinic's staff and administrators, and is in part intended to serve as an introduction to the offered services in addition to the

psychoeducational material. Participants will be informed about the series of trauma-informed mental health care initiatives currently taking place at participating schools and how they may participate.

Structure

The intervention will involve one 90-minute seminar during a date reserved for professional development workshops at the start of the school year. Again, this conclusion was reached with assistance from key consultants. First, a researcher who had conducted mind-body workshops for teacher shared the difficulty in balancing the task of trauma psychoeducation with practice of mindfulness techniques and expressed a desire for teachers to have a trauma education "primer" beforehand. This idea was corroborated by co facilitators of the groups and schools counselors. Second, a consulting school psychologist provided the feedback that teachers would have little time to devote outside of their already busy schedules to multiple sessions of a psychoeducational group. Teachers have much of their time outside of the classroom already constrained by professional development sessions, so it was decided that a single group session would reduce the potential issue of burdensomeness. The duration of the intervention was based in part on feedback from teachers in a 45-minute pilot of the intervention who expressed a desire for a longer session (see Appendix). By creating a single-session intervention, teachers' attendance to all is likely to be higher, and thus attrition rates are more likely to remain low. Implementing the single seminar structure demonstrated more feasibility, given the participating schools' often changing and dynamic academic calendars. Further,

the seminar will give teachers specific instructions on how and where to attend subsequent interventions offered in the school (i.e., teacher groups) which could increase their attendance. The seminar structure, themes and content are outlined below:

The Seminar: Trauma, Teacher Stress, and (Re)Connection

The seminar is titled Trauma, Teacher Stress, and (Re)Connection. It will begin with the facilitator identifying their background and domain of expertise, and offering an overview of goals for the group, in a dynamic, conversational format. The primary stated goal about the group will be for educators to learn about trauma and how it affects students and themselves. Emphasis will also be placed on providing concrete next steps to educators. Following the introduction and overview, facilitators will present a slideshow of psychoeducational materials on the origins, nature, and behavioral/emotional manifestations of trauma and strategies for addressing them.

This presentation is meant to aid teachers in identifying signs of vicarious trauma and/or toxic stress in students and in themselves. Data and best practices about addressing trauma will be synthesized into an interactive slideshow that takes evidence-based research from leading figures in the field of trauma. Data about the incidence rate of trauma in the U.S. population as well as the history of the construct mostly stem from the works of Dr. Bessel Van der Kolk's seminal book on the subject, *The Body Keeps the Score* (2012). Information and exercises regarding the neurobiology of trauma, how it manifests physiologically and how to develop interventions to regulate the distress caused by the symptoms are taken from Dr. Dan Siegel's *The Pocketbook of*

Interpersonal Neurobiology (2012). Further lessons in the physiology of trauma are taken from the work of Dr. Stephen Porges' polyvagal theory and translated into lay concepts (Porges, 2007). Other information is supplemented from public health data and peer-reviewed literature. The presentation itself was designed by the principle investigator based on the research and writings of these and other leaders working at the intersection trauma and education policy. The structure, content, and flow of the presentation of the group intervention was received feedback by several qualified participants, including a psychologist who specializes in group work with teachers, a psychologist who specializes in trauma work, and clinicians who work with teachers.

The presentation also includes opportunities for teachers to participate in brief educational exercises meant to demonstrate the effects of traumatic exposure and toxic stress on the mind and body. Many of the concepts, diagrams, and experiential practices are taken from Dr. Siegel's work on interpersonal neurobiology (2012). Teachers will be asked for how these concepts may play out in an educational setting in their school, and facilitators will moderate this discussion. Finally, facilitators will discuss paths forward to addressing toxic stress and traumatic exposure, discussing the school clinic and the ecological model of addressing the issue in the high school. Teachers will receive a handout outlining the core components of the broader aims of the participating school clinic, complete with information for subsequent interventions offered on site and educational materials. Participants will be encouraged to utilize resources already

embedded within their schools through the participating school clinics, including teacher groups, workshops on mindfulness, and individual counseling.

Study Protocol and Data Collection

Before beginning the intervention, the principle investigator will seek approval from the Institutional Review Board (IRB) at the University of Texas at Austin, with support from a supervising psychologist. After IRB approval, the principle investigator will reach out to contact administrators and clinical staff at participating schools. Teachers at each of the schools will be given an opportunity to join as participants during a staff meeting approximately one month prior to the start of the intervention. At the staff meetings, all attending teachers will be informed about the upcoming opportunity to attend a psychoeducational group on toxic stress and trauma as it relates to teacher stress. Teachers will be asked to complete surveys on their laptops during staff meetings, or will be allowed to use their phones as a means of completing the online surveys. These measures will be delivered to teachers online through Qualtrics, a safe-to-use and protected survey website. Notably, at the start of the Qualtrics survey, there will be a consent form (cover letter) attached, describing details of the study. Teachers who complete the questionnaires will then be randomized into a control-waitlist group and an intervention group using a randomization number generator. Participants part of the intervention will attend the group, the date for which will vary during the Fall semester depending on the high school. The control group, on the other hand, will be made up of

teachers who filled in pre-test measures at the staff meeting and are put on a wait-list, with the option of attending the group at a later date.

Within a week after the intervention, teachers in the treatment and control groups will be e-mailed another Qualtrics survey, containing post-test measures. Pre/post measures for both groups will involve the demographics questionnaire, the CARD, and the ARTIC survey. The outcomes captured by these surveys are critical in understanding teachers' levels of stress and job satisfaction, and their levels of trauma understanding, respectively. Further, teachers participating in the intervention group will be asked to complete, by hand, a qualitative exit and feedback survey at the end of the intervention. The intent behind both surveys is to capture specific data on the intervention's effectiveness, and to assess for participants likelihood to participate in related subsequent interventions offered in their school. Capturing this willingness to participate in subsequent trauma-informed care is critical to understanding the viability of an ecological model for teacher support built upon iterative interventions.

Measures

Demographics Questionnaire

A demographic information questionnaire will assess participants' age, gender, race/ethnicity, and approximate number of years teaching.

CARD

The Classroom Appraisal of Resources and Demands (CARD) assesses teacher stress by examining teachers' perceptions of classroom demands and resources provided

by the school. This 65 -item Likert-item scale was chosen because of the teacher-specific experiences as conceptualized through the transactional model of stress. The CARD has two scales measured on a 5-point Likert scale, a Classroom Demands and Resources scales. The Classroom Demands scale has 35 items that asks teachers to rate the severity of demands such as "Students with problematic behaviors (not following directions, disrupting class, etc.)", and the Classroom Resources scale has 30 items addresses availability of school resources, such as "Support Personnel for Students with Problematic Behaviors." Participants receive separate scores for each scale, and subtracting the Resources score (Cronbach's = .95, 95% C.I. [0.95, 0.96]) is subtracted from the from the Demands score (Cronbach = .94, 95% C.I. [0.93, 0.95]) to create an *Appraisal Index score*, which is indicative of a teacher's risk for stress Cronbach's alpha for the Demands scale is reported as α = .94, 95% C.I. [0.93, 0.95] Cronbach's alpha for the Resources scale is reported as α = .95, 95% C.I. [0.95, 0.96] (Lambert, McCarthy, O'Donnell, & Wang, 2009). A higher Appraisal Index score indicates a higher risk for perceived stress, capturing the participants' lack of sufficient resources in the face of perceived demands.

ARTIC

Teachers' understanding about trauma concepts and trauma-informed care will be measured using the Attitudes Related to Trauma-Informed Care (ARTIC) Scale (ARTIC-35 Education version). The scale, developed by Baker, Brown, Wilcox, Overstreet, and Aurora (2016), consists of 35-items with each rated on a 7-point Likert scale. The scale

asks participants to choose the option that best represents that personal beliefs around trauma-informed care within the last two months at their job. The scale is made up of eight subscales which capture attitudes related to (1) underlying causes of problem behaviors and symptoms; (2) trauma impact; (3) responses related to problem behaviors and symptoms; (4) behavior on-the-job; (5) self-efficacy within the workplace; (6) reactions to work; (7) personal support of trauma-informed care; and (8) system-wide support for trauma-informed care. The version proposed for use within this study was specifically developed for use within schools. The ARTIC was evaluated among a sample of 760 service providers, 22% of which worked in schools (Baker et al., 2016). The ARTIC-35 demonstrated excellent internal consistency reliability ($\alpha = .91$; Baker et al., 2016). The ARTIC-35 also demonstrated strong test-retest correlations and temporal consistency with a correlation of .84 at $\leq$120 days (Baker et al., 2016).

Likelihood of Utilizing Services Survey

The Likelihood of Utilizing Services Survey was designed with the intent of capturing additional data regarding the intervention's effectiveness and critical feedback for modifying subsequent iterations of the seminar. This survey will be given to teachers participating in the seminar. It is a 4-item self-report questionnaire will be scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The following questions will be listed on each survey: (1) The skills we learned today are useful to me as a teacher; 3) I understand the benefit of using mind-body practices to cope with stress; (3) I feel better informed about the concept of trauma and vicarious trauma; (4) I am

ready and motivated to utilize services within my school that will better help me address these issues. Though this measure has not been psychometrically validated, it has been used as an ad hoc check in tool for previous group interventions (Reiser, Murphy, and McCarthy, 2016).

Qualitative Exit Survey

There will also be a open-ended, qualitative exit survey for teachers participating in the intervention. The aim is to capture a richer variety of data regarding nuances of the intervention, including suggested areas of improvement. This data could inform future implementations of the intervention program so it is better targeted to educators' stated needs. The three questions presented in the qualitative exit survey include: (1) What did you find most helpful about this group?; (2) What was least helpful about this group?; (3) How do you think this group could be improved, based on what you did not find helpful?

Chapter 4: Analysis

Preliminary Analyses

In order to determine the appropriate sample size for the study, a preliminary power analysis was conducted in G*Power 3.1. The power analysis suggested that for a study with 80% power, and an alpha of 0.05 (as is conventional), a minimum sample size of 128 needed to be met in order to detect any significant effect with confidence. The maximum anticipated sample size for the proposed study is 150, which if met would more than meet the minimum sample size for sufficient power. Such a high sample size relative to the minimum required for sufficient power also builds in a buffer against potential attrition. The effort to retain a large sample size is in keeping with a recent meta analysis of quantitative analyses in group work that named adequate sample sizes as one key limitation in the field (McCarthy, Whittaker, Boyle, & Eyal, 2017)

Analysis Plan

A review of best practices in implementation research determined the decision to pursue a mixed-methods approach to analysis for the proposed study. The current landscape for implementation research suggests that using a single methodology for complex interventions such as groups could be inadequate for measuring their efficacy (Palinkas et al., 2015). Integrating a qualitative method portion can help researchers to understand why an intervention succeeded or failed, and guide subsequent implementation efforts. This approach to analysis--combining both quantitative data via pre-post surveys on key outcomes with target qualitative feedback--will be utilized as an effective way to extract richer results from the intervention.

All quantitative data will be analyzed using SPSS 25. The first step will involve a one-way analysis of variance (ANOVA) conducted to determine any significant differences between groups on baseline demographics. Another ANOVA will be performed examining any significant differences between control and treatment group results of their pre-test outcomes on the CARD and ARTIC. If there is significant variation among control group or treatment group schools, analyses will be adjusted to accommodate for that variation in subsequent post-hoc tests. Then, paired t-tests will be used to compare pre-post test results between control and treatment group outcomes. This includes outcomes for demands and perceived levels of stress measured by the CARD and the outcomes for trauma understanding measured by the ARTIC-35. Effect sizes will be calculated using Cohen's *d* (Cohen, 1988). For pre-post tests with missing data, listwise deletion will be used. While not an ideal practice for dealing with missing data

(Peugh & Enders, 2004), it should not impact power in the proposed study due to the target N=150 being well above that required for 80% power. Finally, a descriptive analysis will also be performed on the likelihood to access support services surveys to look for significant trends in the intervention group.

Researchers will also utilize CQR to determine salient themes among the qualitative data in the exit surveys to determine what aspects of the intervention could be improved upon to better work for educators. CQR is ideal for interpreting qualitative data because of its collaborative approach, allowing themes to emerge from data through the careful determinations of a team looking for shared concepts among responses (Hill, 1997). As such, it was deemed a suitable data analysis method for the open-answer feedback elicited from teachers at the end of the proposed intervention.

The principle investigator along with a small analysis team will follow the four key steps outlined recommended in the CQR process. First, the principle investigator along with a small team of graduate students will identify key domains of interest from a sample of feedback data from one of the participating schools. These domains are broad areas of focus that can be further differentiated into more specific codes of interest. The second step of CQR is for each team member to separately identify these potential codes that summarize content within each domain CQR (Hill, Knox, Thompson, Williams, & Hess, 2005). The principle investigator along with student assistants will create domains, separately create codes, and then come together to compare results. Discrepancies

between codes were resolved by rigorous discussion as to how a code show be defined, with the end product being the code list for teacher feedback.

Then, the team will perform the latter two parts of the CQR process. This involves first applying codes from the code list to additional data as a way to test the its compatibility and to determine if any previously undiscovered themes emerge. Finally, the coding tezam will appoint an auditor to independently validate the use of established codes on further data. Disputes that arise between the auditor's application of codes and the study coding team will be resolved using further discussion and debate.

It is important to note that this qualitative data will be unlike the typical, interview-length material that is treated with CQR. Teachers will be encouraged to provide feedback at the end of their exit survey as to what did and did not respond to about the intervention, and their responses may range from single-words to several sentences. Despite the relatively small pool of data to work with, the principle investigator still deemed CQR to be an appropriate step so as to definitively express common themes among feedback from teachers. In the spirit of remaining as open as possible to potential domains, researchers will attempt to capture emergent topics even when they did not precisely adhere to the research questions (Corbin & Strauss, 1990).

Hypotheses

The following results are hypothesized upon analyzing pre and posttest data from participants and conducting CQR on qualitative data. In addition to the hypotheses below, it is anticipated that there will be no significant differences between treatment and control

groups on any of the measured outcomes at pre-test, and that any differences are the result of natural variation in the sample. Hypotheses correspond to the four research questions proposed above:

Hypothesis 1) There will be a statistically significant improvement on the outcome of teacher stress in the intervention group ($p < .05$), compared with no statistically significant difference between pre and posttest stress outcomes for the control group, with Cohen's d indicating a medium to strong effect. Outcomes will be assessed by comparing mean pre and posttest scores on the CARD Appraisal Index score for each group via paired t-tests. A higher Appraisal Index score indicates greater risk for stress. The difference in outcomes between control and treatment groups will be accounted for by the intervention which imparts relevant information about student and teacher trauma that can better contextualize issues facing teachers and therefore reduce their stress.

Hypothesis 2) There will be a statistically significant, positive difference between pre and posttest outcomes for the treatment group on beliefs about trauma and trauma-informed care as calculated by the ARTIC-35 ($p < .05$), with a strong effect calculated using Cohen's d. This significant increase in outcome scores for the treatment groups will be accounted for by the in-depth trauma information communicated in the intervention, and calculated using paired t-tests on pre/post test outcomes for both groups. This psychoeducation will help educators give more informed responses to the questions on the ARTIC, which is organized around knowledge of trauma-informed care. There will not be any statistically significant changes in pre and posttest score for the control group.

Hypothesis 3) Teachers with higher mean scores on the ARTIC and a lower Appraisal Index score for the CARD will be more likely to endorse accessing support services. No single demographic indicator (age, gender, ethnicity, etc.) will predispose someone to accessing services. Results here may be informed by the teachers' desire to reach out to services after trauma-informed psychoeducation.

Hypothesis 4) Teachers will offer feedback regarding their experience of the intervention, which will vary individually but will beget common themes when examined collectively. While the exact results of CQR by definition cannot be predicted, some results may resemble themes discovered in the pilot intervention (see Appendix).

Pilot Analyses

I conducted an IRB approved, small pilot of the above-proposed study to explore the interest of the intervention. After administration of intervention at two Central Texas public high schools, participants were asked to complete a demographics questionnaire with questions relating to age, gender, and race/ethnicity. Participants then completed a questionnaire measuring their likelihood to utilize the offered psychoeducational topics and access support services. Participants were also encouraged to complete a qualitative exit survey with open-ended questions evaluating the pilot's strengths and weaknesses. I then input the quantitative data into SPSS 25 to conduct a descriptive analysis of these demographics and survey results.

Following the descriptive analysis, I conducted a qualitative data analysis of qualitative exit survey data using Consensual Qualitative Research methods (CQR) (Hill,

1997). I and a graduate student assistant followed the first two of the four key steps outlined recommended in the CQR process. First, we identified domains of interest from a sample of feedback data from the school that first participated in the pilot. Then, in keeping with the second step of CQR, each of us member separately identified potential codes that summarize content within each domain CQR (Hill, Knox, Thompson, Williams, & Hess, 2005). We then created domains, separately created codes for those domains, and then came together to compare results. Discrepancies were resolved by debating over the parameters of each domain and their subsequent codes or-sub domains, with the end product being the code list for teacher feedback (Appendix).

As noted earlier, this qualitative data is shorter than that used with most CQR methodologies and was used as an additional level of rigor to ensure targeted feedback was extracted from teacher responses. Despite the relatively small pool of data to work with, the principle investigator still deemed CQR to be an appropriate step so as to definitively express common themes among feedback from teachers.

Chapter 5: Results

The following results comprise the findings from the pilot intervention of the proposed psychoeducational group. Looking at descriptives of the demographics results, the modal participant was a secondary school teacher, age 50-59, female, and white (see Table 1 for more information). Regarding participant responses to the Likert-scaled item on the feedback survey, on average teachers agreed statements endorsing the usefulness of the intervention, trauma education, and motivation to seek further support. For

example, most teachers in both schools on average agreed that the skills taught were useful to them. They also agreed on average that they understood the benefits of using mind-body practices to cope with stress. Further, they agreed on average above being better informed about trauma generally, and agreed that they felt more motivated to seek additional supports in their schools. These results show be viewed as a quick snapshot of participant takeaways from the intervention, indicative of their likelihood to pursue similar interventions in the future (see Table 2).

Results of the CQR process are limited due to the small number of preliminary sub-domains and core ideas with each domain. Therefore only a select set of codes will be discussed below. Codes were selected for further discussion based on their frequency in the preliminary data set, and also to the extent to which they answered the actual questions posited in the survey. What follows is a primer of some of the salient domains, codes, and examples from teachers about their experience of the pilot intervention.

Content of Presentation

Within the domain of Content of Presentation, several sub-domains emerged (see Appendix). During this preliminary stage of analysis, the research team employed an approach to coding that erred on the side of over-coding, combining team member codes that captured the same ideas. Due to the size and diversity of core ideas within this domain, the team attempted to group core ideas into sub-domains when possible to better categorize codes. The sub-domains found within Content of Presentation are: Discussion

of Vicarious Trauma, The Regulation Triangle, Contextualizing Behaviors, and Sources of Stress. Two sub-domains among these are highlighted below.

Discussion of Vicarious Trauma. Regarding the content of the presentation, many teachers commented on the discussion of vicarious trauma specifically. Some teachers reported that the term resonated with them, as with one teacher who said "vicarious trauma is new to me in terms of a label...but i do recognize [that] certain stories of students linger with me at home." Another teacher explained how the term illuminated things for them. They said that "vicarious trauma was interesting and very relatable. It helps explain how [my teaching] is affected." Other teachers simply noted it as the most important takeaway of the presentation for them.

Contextualizing Behavior. Other teachers noted the presentation's usefulness in providing context for student behavior through the lens of trauma. Giving new meaning to the stressors of student behavior seemed to offer teachers a different perspective on how they might interact with their students. One teacher remarked the helpfulness of "naming some symptoms to identify behaviors, possibly to notice behaviors and be more empathetic before labeling a student as 'trouble'." Another teacher simply wrote that the "correlation between student trauma and misbehavior" was helpful.

Quality of Presentation

The domain's title is fairly straightforward and captures the aggregate of feedback regarding the general mechanics of the pilot intervention. Within this domain, many sub-domains emerged regarding length, execution, and logistics (see Appendix).

The specific sub-domains identified by the team include: Duration, Demeanor of Presenter, and Practice Component. Duration and Practice Component sub-domains will be examined in greater detail below.

Duration. One of the most common refrains from teachers following the presentation was that they wished it was longer, a desire clearly reflected in their feedback. Teachers asked for "more time," stated that the period for the intervention was "too brief," and that "more time was needed to discuss concepts that were brought up." The pilot lasted 45 minutes so as to accommodate requirements of the professional development schedule that featured the presentation, and it is clear that more time was needed to unpack some core concepts. One teacher mentioned that "a longer seminar with more detail would be greater." This is one of the reasons why the proposed intervention will last 90 minutes instead of 45 minutes. Teachers clearly wanted more time to digest the material and ask the presenter questions related to their own experience.

Practice Component. Teachers expressed a clear desire for more hands-on, interactive, and practice-related content from the presentation. One teacher stated that they wanted "more interaction time with small table groups" to discuss content from the presentation. Another expressed a desire for the presenter to "add an interactive exercise," but noted that "this would require a longer seminar." The simple request of "more strategies for teachers" appeared several times in the feedback. This desire for practice and skills related to trauma-informed care is encouraging, and reflects an eagerness from teachers that could be harnessed by subsequent skills-based interventions.

Chapter 6: Discussion

Summary

While researchers and community leaders have developed group interventions (and other modalities) to support students experiencing trauma, far fewer interventions

have been developed to resource teachers who work with these students. When looking at the issue from a transactional model, vicarious trauma may contribute to the well-documented phenomenon of teacher stress and associated burnout by acting as a demand on their time, without sufficient resources to cope. What little research has been done to date with teachers working with trauma in the classroom suggests that many experience marked stress and burnout, and that they want more resources, information, and support. Given this growing evidence, and the evolving understanding of trauma and its effects, I propose a group intervention for teachers to help them address it in their classroom and how to support themselves. The purpose of the single-session, psychoeducational group is designed to impart knowledge about trauma and its effects on both students and teachers. The goals of the intervention include reducing their stress, increasing their understanding of trauma, and providing an entry into more in-depth support services.

Limitations

The proposed intervention has challenges that are inherent to group work. One of the most immediate limitations when trying to quantify the efficacy of a group based intervention is the ability to maintain independence of observation among participants (McCarthy, Whittaker, Boyle, & Eyal, 2017). Indeed, it would be difficult to ensure that participants in the psychoeducational group do not share the material they learned with those in the control group prior to them taking the posttest measures.

The brevity of the intervention comes with its own limitations. In order to ensure that the trauma-related information is effectively communicated to participants,

expanding into three or four sessions could be considered. Then, researchers could use a repeated measures ANOVA design to increase power and determine if outcomes could further improve among teachers with several administrations of a lengthier intervention. Part of the appeal of this intervention, though, is brevity: the single-session intervention ideal for the typically overscheduled and under-resourced teachers. This brief intervention is meant to motivate teachers to further explore a constellation of more targeted, skills-based interventions that could build upon its foundational material.

The self report measures are another limitation to be considered with this study. When trying to measure the process of change in a group setting, it can be difficult to imagine another means of reporting outcomes other than using group members' own perceptions. In a more comprehensive test of stress among participants in the future, perhaps measuring biomarkers as a means could be a viable alternative to self-report measures, though such an endeavor is outside the scope of this study.

Perhaps the most important limitation to bear in mind is the potential for variability in continued care offered to teachers among participating schools. Following the intervention, the intention is for teachers to access available support from clinics built in to the schools. Ideally, these supports come in the form of an array of options: mindfulness workshops centered on addressing toxic stress and symptoms of trauma; individual counseling; clinical consultations with therapists; support groups all have been discussed as options for teachers. Despite best intentions, some teachers may find access to (or availability of) services at their school more robust than others. Researchers can

combat this potential issue by coordinating with participating schools and clinical staff to ensure continuity of care options for teachers following the psychoeducational group.

Future Directions

This intervention merely sets the foundation for addressing trauma in schools, and ideally could target administrators, support staff, and even parents in addition to teachers. This group is also not limited to usage in secondary schools, as teacher stress is ubiquitous across grade levels and such an intervention may prove just as promising for elementary teachers. Such a goal would certainly be in keeping with the TIC model of a systemic approach to solving trauma. The proposed intervention exists among others simultaneously, setting a foundation and providing a lingua franca for addressing trauma and its manifestations among students and educators. Ideally, teachers would be motivated to attend subsequent interventions for support and learning following this initial foray into trauma education.

The pilot feedback from teachers indicating interest in practice-related learning is encouraging, and suggests that they would be open to subsequent skills oriented interventions following this introductory intervention. The usefulness and resonance that the majority of participants reported feeling about this topic certainly indicates that it would be important for teachers to have ready access to trauma education. On the Likelihood of Using Services Survey, the average responses from teachers indicated that they were intrigued by the information delivered in the intervention, and that they want more of the same to work with students and with their own distress. Indeed, this outcome

indicates that more trauma education may help teachers more carefully facilitate interactions with students struggling with their own trauma. The positive reaction to contextualizing student behaviors through the lens of trauma indicates that this may be a key point to emphasize in future teacher presentations, as student misbehavior is a commonly identified source of teacher stress (Spilt, Koomen, & Thijs, 2011). But most important, this trauma education could prove vital to teachers understanding their own internal experience and provide a roadmap towards healing that starts in their own school.

The ubiquity and complexity of trauma demands equally complex interventions that look at the totality of the issue with nuance and compassion. Some trauma-informed interventions have moved in this direction; they eschew scapegoating teachers as entirely responsible for student success and instead adopt an ecological model of support (Dorado, Martinez, McArthur, & Leibovitz, 2016). At their best, they advocate for an understanding of others' struggles through a lens of survival: those in the throes of trauma are only trying to survive the best they know how. It is this kind of compassionate disposition that could help shift the balance for teachers experiencing unimaginable stress. There is a path to support teachers by contextualizing student issues with data and practices about trauma and its effects. Instead of penalizing teachers for their struggles with students, they can be empowered by this information to better support their students and themselves.

Tables

Table 1

Demographics for Participants in Pilot Study

	School 1	School 2
N	25	40
Age	7 “60 or older;” 3 “50-59;” 6 “40-49;” 4 “30-39;” 5 “18-29”	3 "60 or older"; 12 "50-59"; 9 "40-49"; 11 "30-39"; 5 "18-29".
Gender	19 Female; 6 Male	33 Female, 7 Male
Ethnicity/Race	3 Hispanic/Latino; 20 White; 1 Black or African American, 1 Asian American	10 Hispanic/Latino; 26 White; 3 Black or AfricanAmerican; 1 “Other;” 10 No Response

Table 2

Descriptive Results from Pilot Survey

Questions (Answers 1= Strongly Disagree…5=Strongly Agree)	School 1	School 2
1) The skills we learned today are useful to me as a teacher.	*M* = 4.17 *SD*=1.03	*M* = 4.44 *SD*=0.61
2) I understand the benefit of using mind-body practices to cope with stress.	*M*=4.17 *SD*=0.87	*M*=4.55 *SD*=0.50
3) I feel better informed about the concept of trauma and vicarious trauma	*M*=4.26 *SD*=0.96	*M*=4.41 *SD*=0.66
4) I am ready and motivated to utilize services within my school that will better help me address these issues.	*M*=3.90 *SD*=0.86	*M*=4.29 *SD*=0.76

Appendix

Domains, Sub-domains, and Examples from Qualitative Pilot Data

- ***Feedback about Content***
    - Vicarious trauma
        - *"Vicarious trauma was interesting & very relatable. It helps explain how hearing it often is to teach, even though identifying the source can be difficult."*
    - Regulation triangle
        - *"Understanding the regulation triangle was helpful and insightful."*
    - Contextualizing behaviors
        - *"Correlation between Trauma & demeanor/actions. Thanks!"*
    - Source of stress
        - *"Acknowledging that we pick up a lot of stress, not b/c of our students but from our students"*
- ***Regarding the Intended audience***
    - Relevance for teachers
        - *"Good info for teachers."*
- ***Regarding the Quality of Information***
    - Reliability (research-based)
        - *"Clear, direct presentation. Respectful tone – professional. well researched."*
        - *"LOVED the scientific research and information. So nice to learn from an expert in academia & in the field."*
    - Details (depth, specificity)
        - *"Perhaps too much info, but not enough emphasis on any single aspect."*
        - *"A longer seminar with more detail would be great."*
- ***Quality of Presentation***
    - Duration (Short/long)
        - *"Just feel like I need more time and strategies to work better with students."*
        - *"Too brief."*
    - Demeanor of Presenter
        - *"Clear, direct presentation. Respectful tone – professional. well researched."*
    - Practice Component (interactive elements or practical tools)
        - *"More interaction questions w/ small table groups."*

- *"Everything was extremely useful…The only thing I would suggest is to expand the presentation to include more explicit examples for teachers to identify behaviors and address them."*

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